Attachment C

2006 TRIENNIAL REVIEW
DESCRIPTION OF ISSUES
Updated October 23, 2006

Issue No. 1

Amend the Basin Plan to include a prohibition on the use of septic tank subsurface disposal systems in the Quail Valley area

A large number of septic systems in the Quail Valley area of Riverside County are failing due to the high density of systems, poor soil conditions, high groundwater and other conditions, causing a public health threat and contributing to water quality impairment of surface waters. Eastern Municipal Water District and Elsinore Valley Municipal Water District are evaluating the design and financing of sewer systems for the area. The proposed Basin Plan amendment would prohibit the use of new septic systems in most areas of Quail Valley and would require the residents to connect to the sanitary sewer system within one year of its availability. The prohibition was adopted by the Regional Board on October 3, 2006.

Estimated Resources:

Total Staff Time:	0.6 PY (RWQCB enforcement program staff resources)
Contract $:	none
Duration:	2 years

Issue No. 2

Consider changes to beneficial uses and associated objectives, taking the Water Code Section 13241 factors into account, in relation to standards compliance during wet weather. The immediate focus is to consider revisions to REC-1 and REC-2 beneficial uses and bacterial water quality objectives for surface waters, based on USEPA's national criteria (*E. coli* and/or enterococci) and the recommendations of the Storm Water Quality Standards Task Force (SWQSTF). SWQSTF recommendations are now likely to include: 1) adoption of a REC-1 subcategory beneficial use definition and redesignation of the REC subcategory that applies to certain waters; 2) adoption of a high flow suspension of REC-1 standards; 3) removal of REC from certain waters. Add rationale for the 2.2 mpn/100 ml Coliform discharge limit for POTWs discharging to the Santa Ana River and its tributaries.
The SWQSTF has indicated its commitment to assist with other tasks identified in this list. Commencement of this support work is contingent on the schedule for completion of the ongoing REC-related standards review.

During the public participation process leading to the development of the 2002 Triennial Review list and work plan, co-permittees in the Regions' urban, area-wide storm water runoff NPDES permits and other stakeholders in the Region recommended that the

question of compliance with water quality objectives during wet weather be considered, including whether and to what extent the Water Code Section 13241 factors had been evaluated in this context. The stakeholders also recommended that beneficial use designations be reviewed to assure that established water quality objectives were appropriate. This issue was identified as a lower priority item on the draft list, with the note that significant stakeholder resources would be necessary to conduct the recommended review, in light of Board staff resource limitations.

The draft 2002 Triennial Review list included as a high priority the review of REC-related bacterial quality objectives to consider US EPA's national bacteria quality criteria, which are based on *E. coli* and enterococcus. The current Basin Plan objectives are based on fecal coliform.

Based on commitments from the stakeholders to provide requisite support, the approved 2002 Triennial Review list placed the standards review issue identified by the stakeholders high on the list. In part, the Board recognized the merit of conducting the standards review to assure that the WC Section 13241 factors were properly evaluated when considering changes to the bacterial quality objectives.

In response to the adopted 2002 Triennial Review, the Stormwater Quality Standards Task Force was initiated. While the Task Force (or other stakeholder groups) may ultimately elect to dedicate resources necessary to conduct standards reviews on a broad scale (including other items on the proposed 2006 Triennial Review list), the initial focus of the Task Force effort is on REC-related standards. The Task Force has developed preliminary recommendations, including: (1) a high flow suspension of REC standards; (2) adoption of a "limited" REC subcategory; (3) adoption of *E. coli* objectives; (4) adoption of a narrative pathogen objective; and, (5) adoption of objectives based on *E. coli.* . The Task Force is also preparing recommendations, based on Use Attainability Analyses, for re-designation and de-designation of certain waters. The documents prepared by the Task Force are posted on the Santa Ana Watershed Project Authority website (www. sawpa.org). SAWPA is a key sponsor of and facilitator for the Task Force effort.

As stated above, the immediate focus of the SWQSTF is to consider revisions to REC-1 and REC-2 beneficial uses and bacterial water quality objectives. The 1995 Basin Plan includes a bacterial quality objective for REC-1 waters of a log mean of <200 fecal coliform organisms per 100 ml based on five or more samples per 30-day period. In 1986, the EPA published national criteria guidance *Ambient Water Quality Criteria for Bacteria – 1986* (EPA 440/5-84-002), recommending the use of *Escherichia coli* and enterococci as indicator bacteria. The epidemiological data upon which the criteria guidance is based indicate that *E. coli* and enterococci are better correlated with health effects related to water-contact recreation. USEPA's Action Plan for Beaches and Recreational Waters (EPA/600/R-98/079, March 1999) has directed all states to adopt bacterial standards that are consistent with current EPA guidance by 2003. The use of *E. coli* and enterococci as bacterial indicators is reflected in Title 17 of the California Code of Regulations, Sec. 7956, *et seq.*, regulations for public beaches and ocean

water-contact sports areas. These regulations implement Assembly Bill 411. In addition, the Ocean Plan, 2004, adopted by the State Water Resources Control Board, includes standards implementing CCR Section 7956, *et seq.,* applicable to marine waters of the state, including the Santa Ana Region.

The Regional Board has implemented the recommendations of the Department of Health Services when setting effluent limitations for the discharge of treated municipal wastewater to the Santa Ana River and other waters that are used for water contact recreation. The Department's recommendations derive, in part, from the science underlying the Reclamation Criteria developed by the Department for various recycled water uses, including discharges to nonrestricted recreational impoundments. These Criteria are codified in Title 22 of the California Code of Regulations. Briefly, these criteria specify that discharges of recycled water to nonrestricted recreational impoundments (i.e., those with REC-1 uses) must be adequately oxidized, coagulated, clarified, filtered and disinfected (tertiary treated or equivalent). The Criteria establish a performance standard of 2.2 mpn/100 ml total coliform to define adequate disinfection. The intent of these criteria is to assure that when recycled water is used for REC 1 purposes, it is essentially pathogen-free, thereby protecting public health. The Department also developed wastewater disinfection guidelines for discharges of wastewater to REC-1 surface waters ("Wastewater Disinfection for Public Health Protection"). These disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of recycled water to nonrestricted recreational impoundments, since the public health risks under both scenarios are analogous**.** Accordingly, to assure the protection of public health, the Board's waste discharge requirements for POTW discharges to REC-1 waters apply this 2.2 mpn/100 ml performance standard.

Comments have been received regarding this regulatory approach. The comments indicate that: (1) the Reclamation Criteria do not apply to discharges to surface waters and cannot, therefore, be used as the basis of setting effluent limitations in permits for POTW discharges to surface waters; and, (2) there is inconsistency between the 200 fecal coliform organism/100 ml objective and the 2.2 mpn/100 ml standard included in the Board's permits, and this inconsistency must be addressed before the 2.2 mpn/100 ml standard can be lawfully applied. Findings in the Regional Board's waste discharge requirements have been augmented to provide a more detailed explanation of the basis for implementing this standard. However, explanatory language should also be included in the Basin Plan. The narrative pathogen objective being developed by the Stormwater Quality Standards Task Force, if approved, would be used to support the application of the coliform performance standard in POTW permits.

Estimated Resources:

Total Staff Time:	0.5 PY/year
Contract $:	none
Duration:	3 years+ (assumes ongoing work by the SQSTF)

Issue No. 3

Add TMDL Basin Plan amendments, newly adopted or revised (e.g., for Newport Bay/San Diego Creek Watershed, Middle Santa Ana River Watershed, Big Bear Lake, Canyon Lake, and Lake Elsinore).

Pursuant to Section 303(d) of the Clean Water Act (CWA), the Regional Board has identified a number of water bodies in the Region as impaired, (i.e., not meeting water quality standards), due to various pollutants. The CWA requires that a Total Maximum Daily Load (TMDL) be established for any water body listed as impaired. The TMDL is the allowable amount of a pollutant that can be discharged from all sources, both point and non-point, and still ensure that water quality standards are achieved (water quality objectives are met and beneficial uses are protected).

TMDL development was initiated or completed for certain water bodies/pollutants during the last triennial review cycle. Implementation of approved TMDLs is an ongoing task. During the next 3-year period, Board staff expects to develop TMDLs, and the associated implementation plans, for inclusion in the Basin Plan for the following water bodies:

- Newport Bay and San Diego Creek, for toxic substances, including selenium
- Lake Elsinore, for toxics;
- Canyon Lake, for pathogens;
- Big Bear Lake, for toxicity;

Estimated Resources:

Total Staff Time:	8 PYs / year (TMDL program resources)
Contract $:	$1,200,000 (TMDL Program)
Duration:	3 years

Issue No. 4:

Amend Basin Plan to incorporate the following, recommended or needed to facilitate implementation of the 2004 Nitrogen – TDS Basin Plan amendments:

- **A Reclamation Guidance Document;**
- **An agreement for collaborative implementation by proponents of recharge projects involving imported water and/or interbasin water transfers of management strategies necessary to assure compliance with Basin Plan TDS and nitrogen objectives.**

The Reclamation Guidance Document is an outgrowth of the Nitrogen/TDS Task Force effort to review groundwater basin boundaries and nitrogen and TDS objectives throughout the Region, as well as management strategies for these constituents. The Nitrogen/TDS Task Force investigations were triggered by concerns that the existing

objectives might not have been developed in a scientifically defensible manner and could severely limit opportunities for wastewater reclamation and recharge. The Task Force work culminated in significant amendments to the Basin Plan, which were approved by the Regional Board in December 2004. These amendments have been approved by the State Water Board and Office of Administrative Law. The surface water standards components of the amendments are awaiting US EPA approval.

The Task Force recognized that development of a reclamation guidance document that could be used by project proponents when developing reclamation/recharge projects would facilitate permitting of those projects. The Task Force thus expended considerable time and energy in developing a draft guidance document. The draft document describes the regulatory framework under which reclamation/recharge projects must be considered, including antidegradation requirements and CEQA. The draft document then guides proponents through the permitting/approval process, describing the discretion available to the Regional Board and how and under what circumstances that discretion is likely to be employed. However, work on this document was placed on hold so that appropriate focus could be placed on consideration of the N/TDS-related Basin Plan amendments. In addition, Board staff believed that revision of the document, largely (though not solely) editorial in nature, would be necessary before it could be recommended to the Regional Board.

The Task Force members have requested that completion of the document be given high priority during this triennial review. Board staff agrees that the document would be very worthwhile and believes that its completion would honor the resource commitments of the Task Force.

To implement the 2004 Nitrogen /TDS Basin Plan amendments in an appropriate and equitable manner, it is necessary to assure that groundwater recharge projects using imported water and interbasin transfers, as well as recycled water, are consistent with the nitrogen and TDS objectives established in those amendments, and with the revised nitrogen and TDS management strategies, including maximum benefit programs. Recycled water recharge projects are and must be regulated under waste discharge requirements. A regulatory approach involving waste discharge requirements or conditional waivers therefore could be considered for imported water/interbasin transfer recharge projects. Alternatively, a collaborative effort and Regional Board approved agreement to manage such recharge projects in a manner that assures long-term compliance with the Basin Plan could be considered. The process to establish this groundwater recharge management strategy is beginning; the management strategy itself has yet to be developed. Key components of this management plan will likely be development and implementation of an ongoing monitoring and modeling program to demonstrate and predict the long-term effects of groundwater recharge on TDS and nitrogen objectives, and to identify corrective actions that will be utilized if objectives are at risk of being exceeded due to recharge activities. Once this strategy has been developed, it, along with the Reclamation Guidance Document, should be incorporated into the Basin Plan as elements of an overall program to implement the 2004 N/TDS amendments.

Estimated Resources:
Total Staff Time: 0.1 PY / year (supported by the N/TDS Basin Monitoring Task Force)
Contract $:
Duration: 2 year

Issue No. 5

Complete triennial review of adopted TMDLs (per TMDL schedules/requirements)

The TMDLs adopted and approved for the Santa Ana Region to date take a phased approach and include commitments to review the TMDLs periodically to assess the need for refinement. Since the TMDLs are incorporated in the Basin Plan, modifications of TMDLs require a Basin Plan amendment.

Estimated Resources:
Total Staff Time: 2.2 PYs (TMDL program resources)
Contract $: none
Duration: 3 years

Issue No. 6

Consider revisions to SHEL beneficial use definition (addition of beneficial use for shellfish harvesting for bait purposes, not human consumption) and re-designation of appropriate waters.

As defined in the Basin Plan, waters designated Shellfish Harvesting (SHEL) "support habitats necessary for shellfish (e.g., clams, oysters, limpets, abalone, shrimp, crab, lobster, sea urchins, and mussels) collected for human consumption, commercial or sports purposes." The SHEL beneficial use is a designated use of Upper Newport Bay. The Basin Plan water quality objective for waters that support SHEL is fecal coliform of a median concentration not more than 14 MPN /100 ml and not more than 10% of samples exceed 43 MPN/100 ml. This objective is intended to protect the health of persons who consume harvested shellfish. This water quality objective is often not met in Upper Newport Bay. A recent use attainability assessment of Upper Newport Bay has suggested that while shellfish are harvested for use as bait, they are not used for human consumption. As a result, the suggestion has been made to create a modified or limited SHEL beneficial use that would include the collection of shellfish for bait purposes only and where there is not, nor has there been, shellfish collection for human consumption. If approved, this refined use would be considered for Upper Newport Bay.

Estimated Resources:
Total Staff Time: 0.35 PY (with assistance from the County of Orange)
Contract $: none
Duration: 2 years

Issue No. 7

Develop/revise nutrient objectives for the Region, focusing on 303 (d) – listed waters, including Newport Bay, San Diego Creek, Lake Elsinore, Canyon Lake, Big Bear Lake and its tributaries. This may include reviewing ammonia objective for specific water bodies based on 1999 USEPA national criteria.

The Regional Board approved nutrient TMDLs for the Newport Bay/San Diego Creek watershed in 1998, for the Lake Elsinore and Canyon Lake watersheds in 2004, and the Big Bear Lake watersheds in 2006, to address eutrophic conditions (nutrient over-enrichment) in receiving waters. The TMDLs require the Regional Board to review and revise as necessary relevant nutrient water quality objectives.

Studies are being conducted, pursuant to the Newport Bay/San Diego Creek watershed nutrient TMDL implementation plan, to consider revised nutrient objectives. The results of these investigations will be used to develop specific recommendations for changes to the nutrient objectives. It is expected that these recommendations will be considered during this Triennial Review cycle.

Recent data collected from Lake Elsinore and Canyon Lake have shown the need to revise the objectives for total nitrogen, total phosphorus, chlorophyll A, and dissolved oxygen for the TMDLs of these lakes. These TMDLs will be updated within the next two years.

Additional data are being collected from Big Bear Lake and it tributaries to allow the appropriate revisions to its TMDL within the near future.

The USEPA issued national guidance on developing ammonia objectives in 1999. Although the guidance was developed to protect waters from toxic effects, ammonia also contributes to nutrient problems in waters. The 1999 USEPA national criteria has already been incorporated into the Canyon Lake TMDL and possibly will be incorporated into other TMDLs in the Region. It might be efficient to adopt the 1999 national criteria Regionwide at the same time that the next TMDL adopts the criteria.

Estimated Resources:
Total Staff Time: 1 PY/year(TMDL program resources)
Contract $: none
Duration: 3 years

Issue No. 8

Amend the Basin Plan to include a prohibition on the use of septic tank subsurface disposal systems in the Cherry Valley area.

Rising nitrate levels have been observed in water wells in the Cherry Valley area (located in the Beaumont Groundwater Management Zone). Recently nitrate concentrations in a couple of groundwater production wells have approached the MCL. On-site waste disposal systems have been identified as a possible source of nitrates in groundwater. The proposed Basin Plan amendment would prohibit new on-site waste disposal systems in the Cherry Valley area.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: 1 year

Issue No. 9

Develop criteria for mitigating wetlands impact mitigation. Revise narrative to expand wetland definition and description of 401 process.

Staff proposes to develop regional criteria for determining appropriate mitigation when wetlands and other Waters of the State are impacted by various construction activities, primarily those involving dredging and filling. Dredging and filling activities are subject to:

- Permits issued by the U.S. Army Corps of Engineers, pursuant to CWA Section 404; and,
- Water quality standards certifications issued by the SWRCB or Regional Board pursuant to CWA Section 401.

In some cases, waste discharge requirements are adopted by the Board for dredge and fill projects. These regulatory actions implement federal and state requirements for “no net loss of wetlands” as a result of land use practices, and state and federal policies encouraging the expansion of existing wetlands and creation of new ones.

Successful mitigation of the loss of wetlands and other Waters of the State depends on a number of factors, including consideration of the ecological functions and values of the impacted area, and the location of the proposed mitigation (within or outside of the impacted watershed), among others.

To develop information needed to further investigate this issue, an inventory and assessment of the quality of the riverine wetland resources in Region is being conducted. This work has been partially funded by a USEPA grant and is nearing completion.

The criteria that staff proposes to develop will enable both staff and the regulated community to more easily and consistently determine appropriate mitigation projects when wetlands and other waters of the State are affected by construction or development.

Estimated Resources:
Staff time: 0.3 PY (Partially funded by a USEPA grant)
Contract $: none
Duration: 2 years

Issue No. 10

Add the following water bodies to Tables 3-1 and 4-1 and assign WQS (expanded from 2002 Basin Plan Triennial Review List):

a. Add Santa Ana Delhi Channel; divide into Reaches from Upper Newport Bay to headwaters (beginning of Santa Ana Gardens and Delhi Channels) and assign REC-1 or REC-1 subcategory or remove REC-1, REC-2, WARM, WILD, and EST, as appropriate;
b. Add Mystic Lake and assign intermittent REC-1, REC-2, RARE, WARM, WILD, and BIOL as appropriate;
c. Add Los Cerritos Wetlands and assign REC-1, REC-2, RARE, WILD, BIOL, SPWN, MAR, and EST as appropriate.
d. Add Buck Gully, Los Trancos Canyon Creek, Muddy Canyon Creek, Pelican Hill Waterfall, Pelican Point Creek, Pelican Point Middle Creek, and assign appropriate REC-1 or REC-1 subcategory, REC-2, WARM, and WILD as appropriate;
e. Add East Garden Grove Wintersburg and Bolsa Chica/Anaheim-Barber City Channels and assign appropriate REC-1 or REC-1 subcategory, REC-2, WILD, and WARM as appropriate;
f. Add Carbon, Fullerton, and Brea Creeks (San Gabriel River watershed) and assign appropriate REC-1 or subcategory, REC-2, WILD, and WARM, as appropriate;
g. Add Laguna Lake (in Fullerton) and assign appropriate REC-1 or REC-1 subcategory, REC-2, WARM, WILD, and COMM as appropriate;

These waters were not specifically included in the 1995 Basin Plan. In addition to listing these waters in the Basin Plan, appropriate beneficial uses and water quality objectives need to be identified for them.

- The Santa Ana Delhi Channel discharges to Upper Newport Bay. The SWQSTF is assisting Board staff to determine appropriate assignment of beneficial uses to this water. This will include the preparation of a use attainability analysis wherever REC-1 is not assigned.

- Mystic Lake is a large, ephemeral lake in the San Jacinto River Valley. Recent land acquisitions have brought Mystic Lake within the California Department of Fish and Game's San Jacinto Wildlife Area.

- The Los Cerritos Wetlands are located in the Cities of Seal Beach and Long Beach adjacent the San Gabriel River. In the Santa Ana Regional Water Quality Control Board's section of the wetlands (located in the City of Seal Beach), property containing degraded wetlands has been purchased to be preserved. The wetlands will be restored and/or enhanced.

- Buck Gully empties into the ocean just south of Corona Del Mar State Beach and into the Newport Beach Marine Life Refuge Area of Special Biological Significance (ASBS). Los Trancos, Muddy Canyon and Pelican Point Creeks flow through Crystal Cove State Park. All these waters discharge into the Irvine Coast Marine Life Refuge Area ASBS.

- Laguna Lake is a seven-acre lake in the Laguna Lake Park in the City of Fullerton.

- East Garden Grove Wintersburg, Anaheim-Barber City, and Bolsa Chica Channels are soft- bottomed, engineered flood control channels that discharge into Huntington Harbour and Anaheim Bay.

- Carbon, Fullerton, and Brea Creeks drain into Coyote Creek, a tributary to the San Gabriel River.

Estimated Resources:
Staff time: 0.3 PY (SWQSTF is expected to support work on this task)
Contract $: undetermined
Duration: 2 year

Issue No. 11

Add new reaches and designate appropriate beneficial uses (Table 3-1 and Table 4-1). Changes needed as a result of Federal Energy Regulatory Commission (FERC) relicensing (modified from 2002 Basin Plan Triennial Review List):

a. Lytle Creek:

1) From 1-15 to Korean Christian Camp Bridge or SCE diversion – designate new reaches and COLD or WARM beneficial uses, as appropriate. Designate reaches Intermittent as appropriate.

2) **From Korean Christian Camp Bridge or SCE diversion to headwaters of South, Middle, and North Fork – designate as a separate reach and keep COLD;**

b. **Mill Creek, from SAR to Valley of the Falls Road Bridge or upper SCE diversion – designate new reaches and assign COLD or WARM beneficial uses, as appropriate. Designate reaches Intermittent as appropriate;**
c. **SAR from Seven Oaks Dam to Power House 1 – designate as COLD or WARM, and existing or intermittent, as appropriate, and list as Reach 6;**
d. **SAR from Power House 1 to headwaters – list as Reach 7 and keep COLD.**

In 2003, the Federal Energy Regulatory Commission (FERC) issued new licenses for the continued operation and maintenance of hydroelectric facilities operated by Southern California Edison (SCE) on Mill Creek, Santa Ana River, and Lytle Creek. In coordination with FERC's licensing, the State Water Resources Control Board issued a CWA Section 401 Water Quality Standards Certification (401 Certification) for the hydroelectric operations. These regulatory actions impose several conditions on these hydroelectric operations, and on the several water districts that divert and appropriate water from these streams downstream from the hydroelectric operations in coordination with the operation of these facilities. To accurately reflect the conditions of the FERC license and the 401 certification, it appears appropriate to designate new reaches of the main stem of Mill Creek from the SR 38 bridge upstream to its headwaters, of the Santa Ana River above the Seven Oaks Dam to the Bear Creek confluence, and of Lytle Creek from its valley reach upstream to the Miller Narrows diversion, and to determine and assign appropriate beneficial uses to these reaches. Upon an initial review of the stream reaches and related FERC documents, it appears that these waters support a cold water ecosystem, at least intermittently, and do not support and sustain a warm water ecosystem.

Estimated Resources:
Staff time: 0.2 PY (supported by USARWRA)
Contract $: undetermined
Duration: 2 years

Issue No. 12.

Consider adopting and/or removing existing site-specific objectives for the Santa Ana River. The Santa Ana River Dischargers Association (SARDA) has identified at least three pollutants, including aluminum, chlorine, and cyanide, for which site-specific objectives may be warranted. It may be appropriate to remove site-specific objectives for copper, cadmium, and lead for middle Santa Ana River reaches and their tributaries, as well.

The Santa Ana River Dischargers Association (SARDA) has identified at least three pollutants for which site-specific objectives may be warranted. SARDA would like Board staff to participate in a recalculation effort relative to the aluminum water quality criteria.

The current water quality objective is based on a national standard and SARDA believes that it is significantly lower than necessary to protect the aquatic life of the Santa Ana River.

In addition, SARDA believes that EPA's 1984 guidance for chlorine would not be appropriate for the Santa Ana River. Therefore, they would like Regional Board staff to consider adopting site-specific standards for chlorine for the Santa Ana River if EPA's guidance is adopted for the rest of the region.

Finally, site-specific objectives (SSOs) for copper, cadmium, and lead for the Santa Ana River and certain tributaries were incorporated in the 1995 Basin Plan and submitted for review and approval by the USEPA. EPA reserved action on these SSOs in light of its promulgation of the California Toxics Rule (CTR), which incorporated new scientific information concerning the appropriate objectives for these metals that was not available at the time the SSOs were adopted. EPA reserved action to allow the Regional Board to consider whether it would be appropriate to delete the SSOs and to rely instead upon the CTR. Given the new scientific information, it appears appropriate to withdraw the SSOs in favor of the numeric water quality criteria in the CTR.

Estimated Resources:

Total Staff Resources:	0.2 (Supported by SARDA)
Contract $:	none
Duration:	2 years

Issue No. 13

Update Beneficial Use Table 3-1 and Water Quality Objective Table 4-1 (modified from 2002 Basin Plan Triennial Review), as appropriate, including consideration of :

Add beneficial use designations (Table 3-1):

a. Add COMM to appropriate lakes, reservoirs, and streams;
b. Add RARE to appropriate waters, including all reaches of San Diego Creek, Sand Canyon Wash, valley reaches of Lytle, Cajon, and City Creeks, Day Creek, Barton Creek, Waterman Creek, Fish Creek, Reaches 4, 5, 6, and 7 of the San Jacinto River, Strawberry Creek, North Fork of the San Jacinto River, Sunnyslope Creek, Reach 4 and 6 of the Santa Ana River, Reaches 1 & 2 of Mill Creek, Reach 1, 3, and 4 of San Timoteo Creek, Bear Creek, the Shay Meadows wetland, and Baldwin Lake;
c. Add SPWN to appropriate waters, such as Mountain Home Creek, Lytle Creek, San Antonio Creek, San Jacinto River - North Fork, and San Jacinto River Reach 7, and Santa Ana River Reaches 3 & 4 (Prado Dam to San Jacinto Fault);
d. Add WILD to San Jacinto River Reaches 4 & 5.

Changes needed to reflect existing hydrology:

f. San Diego Creek from upper Newport Bay to drop structure at Macarthur Blvd – designate and name as a separate reach and add EST;
g. Erwin Lake – revise beneficial uses to intermittent.

The commercial and sportfishing (COMM) beneficial use is used for waters that are used for commercial or recreational collection of fish or other organisms, including those collected for bait. There are several inland waters in Region 8 where sportfishing is a popular activity and yet no inland waters have been previously designated with the COMM beneficial use in the Basin Plan. It is appropriate to add COMM to a number of inland waters where this beneficial exists.

Spawning, reproduction, and development (SPWN) waters support high quality aquatic habitats necessary for reproduction and early development of fish and wildlife. Several inland waters have been designated with SPWN, however other waters meet the SPWN criteria and have not been designated with this beneficial use. It may be appropriate to add the SPWN designation to several inland waters that support this beneficial use, particularly if native or popular sport fish are reproducing successfully.

New (since 1998) information has become available indicating that a number of the Region's waters support recently listed rare, threatened and/or endangered species or their habitat, and/or have been given a federal Critical Habitat Designation. These waters should be considered for the RARE beneficial use. In addition, there are a few waters that have had recent historic accounts of a listed species but no accounts of current habitation. The waters that currently are not listed in the Basin Plan as having the RARE beneficial use and that have been reported to support this use, include:

- All Reaches of San Diego Creek (for the Least Bell's Vireo);
- Sand Canyon Wash (for the Least Bell's Vireo);
- Valley reaches of Lytle, Cajon, and City Creeks (for the San Bernardino Kangaroo Rat);
- Day Creek, City Creek, Barton Creek, North Fork of the San Jacinto River, Strawberry Creek, and Reach 7 of the San Jacinto River (for the Mountain Yellow Legged Frog);
- Reach 4 of the Santa Ana River (for the Santa Ana Sucker, Least Bell's vireo, and the Santa Ana River Wooly Star);
- Reach 6 of the Santa Ana River (for the Southwestern Willow Flycatcher and historically the Mountain Yellow Legged Frog);
- Sunnyslope Creek (for the Santa Ana Sucker);
- Mill Creek Reach 2 (for the Southwestern Willow Flycatcher and historically the Mountain Yellow Legged Frog);
- Mill Creek Reach 1 (for the San Bernardino Kangaroo Rat);

- Reach 4, 5, 6, and 7 of the San Jacinto River (for the San Bernardino Kangaroo Rat);
- Reach 5 and 6 of the San Jacinto River (for the Arroyo Toad);
- Reach 3, 4, and 5 of the San Jacinto River (for the San Jacinto Crownscale);
- Oak Glenn Creek (for the Southwestern Willow Flycatcher);
- Reach 1, 3, and 4 of San Timoteo Creek (for the Southwestern Willow Flycatcher and Least Bell's Vireo);
- Bear Creek (for the Southwestern Willow Flycatcher);
- Shay Meadows wetland (for the unarmored three spine stickleback); and
- Baldwin Lake (for the unarmored three spine stickleback).

Species information included above was mostly provided in comments submitted by the Center for Biological Diversity.

Wildlife habitat (WILD) waters support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife. Recent information has become available that certain waters support the wildlife habitat (WILD) beneficial use and have not been assigned that beneficial use. Therefore it is appropriate to assign the WILD beneficial use to these waters.

San Diego Creek's lower reach, as it flows into Upper Newport Bay, is affected by tidal action and salinity. It may be appropriate to assign this reach with the Estuarine Habitat (EST) beneficial use.

Erwin Lake, east of Big Bear Lake, is an intermittent lake, drying out during most years. At the present it is assigned with present or potential beneficial uses whereas intermittent beneficial uses may be the more appropriate designation.

Estimated Resources:
Staff time: 0.4 PY
Contract $: none
Duration: 3 years

Issue 14

Remove Laguna and Lambert Reservoirs from Lakes and Reservoirs section of Table 3-1 and Table 4-1.

Laguna and Lambert Reservoirs, located in the City of Irvine, were used exclusively for storage of agricultural irrigation water. Recently they have been drained and the dams removed. Most of the former reservoir footprint has been or soon will be converted to residential developments.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: <1 year

Issue No. 15

Add waters in the Goodhart Canyon watershed to Santa Ana Region and assign water quality standards. Add or subtract waters that would change as a result of realigning Region's boundary with Region 9 in the area of Laguna Canyon.

The construction of the Diamond Valley Reservoir, located 4 miles southwest of the City of Hemet (Riverside County)and completed in 1999, has altered the hydrology of the Goodhart Canyon Watershed. Before the construction of the Diamond Valley Reservoir, runoff from Goodhart Canyon Water flowed through Diamond and Domenigoni Valleys into streams tributary to the Santa Margarita River, in the San Diego Region and under jurisdiction of the San Diego Regional Water Quality Control Board. The construction of Diamond Valley Reservoir has diverted the runoff from Goodhart Canyon and directed it into the Salt Creek drainage, tributary to Canyon Lake and in the Santa Ana Region. The Goodhart Canyon Drainage area is approximately 4 miles long by one mile wide. The Basin Plan needs to be amended to include this area and to assign appropriate standards to it.

The present boundary between Regional Boards 8 and 9 in the area where Laguna Hills, Laguna Woods, and Laguna Canyon (Orange County) meet may be inaccurate. Inaccurate mapping of watershed boundaries when the boundaries were first determined and recent urbanization has led to a situation in which it is unclear where the appropriate Regional Board boundary is in this area.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: <1 year

Issue No. 16

Add a water quality objective narrative regarding the excessive growth of macrophyte aquatic plants or combine with existing algae narrative objective.

The excessive growth of macrophytes (macroscopic aquatic plants) have significantly impacted beneficial uses of certain water bodies in the region, particularly in Big Bear Lake. Excessive growth of aquatic macrophytes and algae are often the result of excess concentration of nutrients (i.e., nitrogen, phosphorus) in point source and non-point source waste discharges. The excessive growth of algae and aquatic macrophytes can lead to taste and odors problems, color, increased turbidity, and can

depress dissolved oxygen concentrations, leading to fish kills. Action on this issue may include updating and expanding the current algae water quality objective of the Basin Plan to include macrophyte aquatic plants or adding a new narrative objective addressing aquatic macrophytes, and providing discussion concerning the potential for blooms of certain types of blue green algae to lead to toxicity in fresh water lakes.

Estimated Resources:
Total Staff Resources: 0.1
Contract $: none
Duration: 1 year

Issue No. 17

Revise numeric objective for residual chlorine for discharges to surface waters.

The Basin Plan currently specifies that the chlorine residual in wastewater discharged to inland surface waters shall not exceed 0.1 mg/L. During the 1994 revision of the Basin Plan, the California Department of Fish and Game commented that this objective is not sufficiently stringent to protect aquatic and wildlife habitat beneficial uses. Board staff initially proposed that the objective be revised to 0.05 mg/L; however, comments were received from Chino Basin MWD (now, Inland Empire Utilities Agency) and Metropolitan Water District that this revised objective might not be achievable with existing wastewater treatment technologies. It was suggested that compliance with a more stringent chlorine residual limit could necessitate complete reconfiguration of wastewater treatment plant treatment trains or application of overly expensive, innovative technologies. By contrast, other comments indicated the 0.05 mg/L objective might not be sufficiently protective of aquatic life. More recently, USEPA has commented that a chlorine objective for ambient surface waters, not simply wastewater discharges, should be included in the Basin Plan. EPA indicates that the residual chlorine objectives should be identified based on a consideration of the EPA's 1984 Ambient Water Quality Criteria – Chlorine (EPA 440/5-84-030 Jan. 1985).

One of the higher priority issues identified by the Regional Board during the 1994 and 1998 triennial reviews was to evaluate the residual chlorine objective, but it has not been completed to date because of resource constraints.

Estimated Resources:
Staff time: 1 PY
Contract $: undetermined
Duration: 2 years

Issue No. 18

Republish Basin Plan in updated electronic format with updated maps based on Cal Waters data and reflecting changes in watershed boundaries.

At the present it is difficult to access the Basin Plan (including amendments) from the Regional Board's web site. It would be appropriate to update the Basin Plan in an electronic format that would be readily accessible from the web site. In addition, maps of the region are not updated with the latest Cal Waters map data and do not accurately reflect watershed boundaries in the Diamond Valley and Laguna Canyon area. It would be appropriate to update the Region's maps and have them be readily accessible to the public. The State Water Resources Control Board has proposed providing contract funds to complete republishing basin plans and updating maps for all the State Regional Boards.

Estimated Resources:
Staff time: 0.1 PY
Contract $: $700,000 (SWRCB for Basin Plains Statewide)

Duration: 1 years

Issue No. 19

Add narrative on implementation procedures for narrative turbidity and toxicity objectives.

Add narrative on implementation procedures for turbidity:
USEPA has recommended that the Basin Plan should explain how turbidity standards are to be implemented (e.g., how "natural turbidity" is to be determined and what measures are used to control turbidity when the standard is exceeded).

Add narrative on implementation procedures for toxic substances objectives:
The toxicity objectives in Chapter 3 of the Basin Plan are multi-part narrative objectives addressing: (1) bioaccumulation of toxic substances; (2) contaminant concentrations in drinking water sources; and (3) water column, sediment and biota toxic pollutant concentrations adversely affecting beneficial uses. USEPA has recommended that the first narrative objective under Toxic Substances should be amended to read: *Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to aquatic organisms, other wildlife, and human health*. EPA also recommended that the Basin Plan be revised to include a description of NPDES permit implementation procedures for toxicity related objectives.

Estimated Resources:
Staff time: 0.6 PY
Contract $: undetermined
Duration: 2 years

Issue No. 20

Revise Chapter 5 Prohibitions Applying to Inland Surface Waters (saline and sewage discharges) and modify to explicitly include lakes

The Basin Plan does not explicitly prohibit the discharge of acids or caustics (whether neutralized or not), or excessively saline wastes to surface waters. These prohibitions should be added to the plan and modified to explicitly include lakes.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: <1 year

Issue No. 21

Revise Chapter 3 Beneficial Use tables narrative to incorporate Tributary Rule

Revise Section 3 "Beneficial Use Tables" narrative to incorporate the Tributary Rule. Current wording is, "Specific waters which are not listed have the same beneficial uses as the streams, lakes or reservoirs to which they are tributary or the groundwater basins or subbasin to which they are tributary or overlie." This wording should be broadened to reflect wording in 40 CFR 131.10 (b): "In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters. "

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: <1 year

Issue No. 22

Consider revisions to make clear that water quality standards apply to intermittent surface waters, as well as perennial waters.

Board staff has long applied the tributary rule to the Region's intermittent surface waters. To protect the water quality standards of perennial waters, it is necessary to apply standards of perennial waters to the intermittent waters that are their tributaries.. In addition, the numerous intermittent surface waters of the Region are considered waters of the state and of the United States. The California Water Codes states that, "…the quality of all waters of the state shall be protected." Under most circumstances, the United States Army Corps of Engineers considers intermittent waters to be within their jurisdiction and requires CWA Section 404 permits for the dredging of, discharge of fill to, these waters. Consequently, a CWA Section 401 certification is also required before these "dredge and fill" discharges can occur.

Estimated Resources:

Staff time: 0.1 PY
Contract $: none
Duration: <1 year

Issue No. 23

Consider revisions to recognize importance of headwaters as a separate class or category of waters, and of protecting their WQS.

The protection of the headwaters of a stream are critical in restoring or maintain water quality and beneficial uses of the water body. Often the headwaters are most sensitive area in a particular watershed and require special protection. Listing headwaters as a separate class or category would allow more specific protection of that water body.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: <1 year

Issue No. 24

Develop waste discharge prohibitions for excessive sedimentation resulting from controllable water quality factors (targeted at excessive sedimentation in upper Newport Bay, Big Bear lake, and Canyon Lake Watersheds)

Excessive sedimentation negatively impacts the beneficial uses of several of the Region's waters. TMDL's have been developed to reduce the impacts of sedimentation in Upper Newport Bay, Big Bear Lake, and Canyon Lake. The development of waste discharge prohibitions would allow more effective enforcement of the TMDLs and more timely regulation of sediment discharges.

Estimated Resources:
Staff time: 0.5 PY
Contract $: none
Duration: 2 years

Issue No. 25

Consider need for clarification of Chapter 5 Minimum lot Size Requirements and Exemption Criteria for new Developments (using on-site sewage disposal systems)

There are areas in the Region where residential development is occurring on small lots where sanitary sewers are not available. Because of economic factors, there continues to be a demand for this type of development. Studies have shown that high density developments relying on on-site sewage disposal systems (OSDS) impact water quality by increasing concentrations of nitrates in groundwater. As a result, in 1989, the Board adopted Resolution No. 89-157 and amended the Basin Plan to require one-half acre minimum lots for new developments using OSDS. The Regional Board also adopted and subsequently revised certain criteria for exemptions from this lot size requirement. It is not clear that county and municipal planning and building authorities have applied the minimum lot size requirements and exemption criteria consistently and correctly, in part perhaps because of a lack of clarity in the requirements themselves. Board staff is addressing this matter with the involved agencies and may recommend some clarifications of the requirements.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: <1 year

Issue No. 26

Non-regulatory, descriptive updates and revisions, including:

a. Add narrative on Alaska Rule;

On April 27, 2000, USEPA published a final rule (65 FR 24641) regarding when state water quality standards become effective for CWA purposes. This rule, known as "EPA Review and Approval of State and Tribal Water Quality Standards," and commonly called "the Alaska Rule," provides that state water quality standards, or amendments to such standards, submitted to EPA for approval after May 30, 2000 (effective date of the rule), must be approved by EPA before such standards or amendments may be implemented for CWA purposes. The Basin Plan should be updated to reflect this regulation.

b. Update information on approved policies, e.g., Nonpoint Source Enforcement Policy, 303 (d) Listing Policy, etc. (Chapter 2);

The approved policies listed in our Basin Plan have not been updated or revised since 1995. There have been new policies that need to be added and others that require being updated. For example, the Nonpoint Source Management Plan has been adopted, and updated in 2004 with adoption of an Implementation and Enforcement Policy that explains how the SWRCB and RWQCBs will use the Porter-Cologne Act mandates and authorities to implement and enforce the NPS Program Plan.

The Water Quality Control Policy for Developing California's Clean Water Act Section 303 (d) List, referred to as the 303 (d) Listing Policy, was adopted in 2004. The policy

describes the process by which the SWRCB and the RWQCBs will comply with the listing requirements of section 303 (d) of the federal Clean Water Act. CWA Section 303 (d) requires states to identify waters that do not meet, or are not expected to meet, applicable water quality standards after the application of certain technology-based controls. These waters are then to be scheduled for the development of total maximum daily loads (TMDLs).

c. Update Chapter 5 "Disposal of Hazardous and Nonhazardous Waste" to reflect loss of SWAT program;

The final section of Chapter 5 references the Solid Waste Assessment Test (SWAT) program, which was implemented in 1985. The purpose of the SWAT program was to determine whether hazardous or toxic substances above regulatory thresholds, or any other constituents which may threaten water quality, were migrating from a solid waste disposal facility. As of 1995, funding for this program ceased and is not expected to be reinstated. The Basin Plan should be amended to reflect this change.

d. Update SLIC Program Discussion;

The Basin Plan currently contains a description of the SLIC program, the Regional Board's program to address groundwater contamination from volatile organic compounds (VOCs). The information/data in the description need to be updated to reflect current conditions.

e. Update Animal Confinement Facilities (Dairies) discussion in Chapter 5;

The Regional Board's program to address waste discharges from confined animal facilities has evolved significantly, and the Basin Plan should be revised to reflect the current direction of these ongoing activities.

f. Update Nonpoint Source Program discussion in Chapter 5;

Much has been added to the Nonpoint Source Program since the Basin Plan was last updated in 1995. Two major policies added to the NPS program are the NPS Plan and the Implementation and Enforcement Policy. In 2000 a statewide approach for managing NPS pollution, the Plan for California's Nonpoint Source Pollution Control (NPS Plan), was adopted. The NPS Plan required implementation of NPS control Management Measures in the six land use categories of agriculture, marinas & boating, urban, forestry, hydromodification, and wetlands. A key element of the 2000 Plan was implementing these management measures using a three-tiered approach in which the first tier, self-determined implementation, is favored. The second and third tier of implementation incorporate escalating regulatory involvement to achieve program objectives.

In 2004 the Policy for Implementation and Enforcement (I&E) Policy was adopted to provide guidance for enforcement of the state's NPS pollution control program. The NPS I&E Policy abandons the three-tiered approach for implementation of management

measures contained in the 2000 NPS Plan as not being supported by the California Water Code and inconsistent with the SWRCB's Enforcement Policy. The NPS I&E Policy gives direction to Regional Boards to regulate all non-point sources of pollution using the administrative authorities provided by the Water Code's Porter-Cologne Act. Regulatory actions to address NPS pollutant discharges include, but are not limited to, Basin Plan prohibitions, Waste Discharge Requirements (WDRs), and Waivers of WDRs. The NPS discussion in Chapter 5 should be update to reflect this evolution.

g. Add narrative on the efforts to remediate perchlorate contamination in the region.

In 1997, California's Department of Health Services found levels of perchlorate in drinking water wells throughout the State of California, including wells in the City of Rialto. Perchlorate can interfere with the iodide uptake of the thyroid gland which can result in decreased production of thyroid hormones necessary for prenatal and postnatal growth and development, as well as for normal metabolism and mental function in adults. Perchlorate is used as an ingredient in the manufacturing process of such items as solid fuel propellant for rockets, missiles and fireworks and in industrial applications where it is used in the manufacture of matches, flares, pyrotechinics, ordnance and explosives.

It is apparent that previous defense and/or industrial activities has contributed to perchlorate groundwater contamination in the Rialto area. The Regional Water Quality Control Board (RWQCB) has been directing site assessment and remediation efforts in this area for the last several years. The RWQCB has been very active in working with the responsible parties, other affected agencies, and holding numerous public meetings to develop an appropriate remedial action plan. This major activity should be described in the Basin Plan.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: 1 year

Issue No. 27

Update discussion of the implementation of the antidegradation policy in Chapter 2 to address nonpoint source (NPS) pollution.

The Basin Plan references State Board Resolution No. 68-16 as the State's antidegradation policy. USEPA has recommended that the discussion of implementation of the State's antidegradation policy in the Basin Plan should be expanded to clarify that the State has, in State Board Order No. 86-17 and in an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully

consistent with the federal antidegradation policy. Further, the Basin Plan should consider and address how the policy is to be applied to NPS pollution.

Estimated Resources:
Staff time: 0.2 PY
Contract $: none
Duration: 2 years

Issue No. 28

Reevaluate temperature criteria to ensure full protection of aquatic life

The current temperature standard in the Basin Plan protects against adverse effects of heated water discharges on beneficial uses by expressing limits on temperature increases. USEPA has suggested that the temperature objective may be overly general and may not be adequately protective of aquatic life, particularly native species. USEPA's present policy is to protect for the most sensitive species in the water body by season. Optimal temperature values are available for various species for growth and survival at all life stages and should be reviewed.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: 1 year

Issue No. 29

Update dissolved oxygen objectives for WARM/COLD beneficial uses

Comments from USEPA suggest that the Regional Board should consider optimal levels of dissolved oxygen for various life stages of salmonid fishes and other aquatic species. Criteria recommended by USEPA in 1986 include warm and cold water dissolved oxygen values for embryonic, larval, and other life stages (Ambient Water Quality Criteria for Dissolved Oxygen, EPA 440/5-86-003, April 1986). Values are available for salmonid waters and non-salmonid waters with criteria ranging from "no production impairment" to "limit to avoid acute mortality."

Estimated Resources:
Staff time: 0.25 PY
Contract $: undetermined
Duration: 1 year

Issue No. 30

Review silver water quality objectives for WARM/COLD beneficial uses

The Basin Plan currently specifies a silver water quality objective of 0.05 mg/L for groundwater. The Maximum Contaminant Level (MCL) for silver has been revised to 0.1 mg/L. The Basin Plan should be updated to reflect the new MCL. This item was on the list of issues for the 1998 Triennial Review, but has yet to be addressed.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: 1 year

Issue No. 31

Revise fluoride WQO to be consistent with Department of Health Services's MCLs.

The fluoride water quality objective presently listed in the Basin Plan, specified as optimum fluoride concentrations for surface waters, are temperature based and range from 0.7 to 1.2 mg/l. The California Department of Health Services (DHS) has recently implemented a maximum contaminant level (MCL) for fluoride of 2.0 parts per million for the State. Later this year Metropolitan Water District of Southern California (MWD) is planning to begin adding fluoride to the water they distribute to provide the optimum levels required to prevent tooth decay. With the addition of fluoride metropolitan's surface water will have a target level of between 0.7 and 0.8 .ppm. There is a concern that discharges of water fluoridated by MWD may violate the Basin Plan WQO. Staff of MWD has asked Regional Board staff to revise the fluoride WQO to be consistent with DHS's new MCL and with the other Regional Boards in the area.

Estimated Resources:
Staff time: 0.25 PY
Contract $: none
Duration: 1 year

Issue No. 32

Review ammonia objectives based on 1999 USEPA national criteria.
The 1995 Basin Plan incorporated new site-specific objectives for un-ionized ammonia (the toxic form of ammonia) for the Santa Ana River and certain tributaries. These objectives are implemented by limitations on ammonia in waste discharges to these waters. The requisite effluent ammonia limits are also specified in the Basin Plan. Finally, the 1995 Basin Plan includes revised, basin-wide un-ionized ammonia

objectives. EPA reserved action regarding approval of these new objectives and requested that Board staff submit additional technical justification.

EPA published revised national criteria guidance for ammonia in the Federal Register on December 22, 1999. These revised criteria are based on scientific information concerning un-ionized ammonia toxicity. Board staff has advised EPA that given this new science, it does not appear worthwhile to pursue EPA approval of the objectives in the Basin Plan. Staff advised EPA that we would recommend that review of these objectives (and associated implementation provisions) be included in the Triennial Review list. EPA was expected to promulgate criteria for states failing to adopt numerical objectives consistent with the new criteria by 2004.

Estimated Resources:
Staff time: 0.1 PY
Contract $: undetermined
Duration: 1 years

Issue No. 33

Develop and adopt biological criteria for managing water quality

Development of biological criteria was identified in USEPA's *Water Quality Criteria and Standards Plan* (EPA 822-R-98-003, June 1998) as one of six priority objectives for the water quality standards program for this decade. USEPA indicates that the Regional Board should develop bioassessment and biocriteria consistent with USEPA's technical guidance.

Estimated Resources:
Staff time: 2.0 PY
Contract $: undetermined
Duration: 3 years

Issue No. 34

Santa Ana River, Reach 3 – add TOC WQO

Total organic carbon (TOC) is a direct measure of the organic content in water. The California Department of Health Services (DHS) has published draft (4-23-01) Groundwater Recharge Reuse regulations for groundwater recharge with recycled municipal water. The proposed TOC limit is dependent on the percentage of contribution of recycled water to the groundwater in storage. These regulations are applicable to the Santa Ana River, which is comprised primarily of recycled water and is a significant source of recharge in Orange County. It is appropriate to incorporate a

TOC objective for the Santa Ana River, Reach 3, in order to protect the Orange County groundwater recharge activities.

Estimated Resources:
Staff time: 0.1 PY (SWRCB directing statewide effort)
Contract $: none
Duration: 1 year

Issue No. 35

Review Methylene blue-Activated Substances (MBAS) water quality objective for surface waters

MBAS is an indicator for presence of detergents in water. Positive results may indicate the presence of wastewater. The 1995 Basin Plan specifies a MBAS water quality objective of 0.05 mg/L. In 1992, the Department of Health Services updated the MBAS secondary drinking water standard to 0.5 mg/L. The Basin Plan should be updated to reflect the updated standard.

Estimated Resources:
Staff time: 0.05 PY
Contract $: none
Duration: 1 year

Issue No. 36

Santa Ana River, Reach 3 – clarify the COD water quality objective

The Basin Plan specifies water quality objectives for the Santa Ana River, Reach 3, to protect Orange County groundwater subbasins. In the 1983 Basin Plan, Reach 3 objectives are specified as filtered objectives; however, the “filtered” specification was inadvertently omitted for COD from the 1995 Basin Plan.

Estimated Resources:
Staff time: 0.1 PY
Contract $: none
Duration: 1 year